

Claims:

1. A process for the removal of long-chain aliphatic amide impurities from a solution of said amides and fatty acid-derived nitriles which comprises washing said solution with an amount of a strong acid effective to remove the amide as a salt in the acid layer, separating said acid layer from said solution leaving an acid treated fatty acid-derived nitrile substantially free from said amide impurities.
2. The process of claim 1 wherein 0.1 to 15 wt% of said strong acid is employed.
3. The process of claim 1 or 2 wherein said strong acid is selected from the group consisting of sulfuric acid, hydrochloric acid, hydrobromic acid, perchloric acid, nitric acid, fluorosulfonic acid, methanesulfonic acid, trifluoromethanesulfonic acid, toluenesulfonic acid, phosphoric acid and mixtures thereof in combination with a amount of water that allows an amide salt to remain substantially insoluble in excess aqueous acid.
4. The process of any one of the preceding claims wherein said process conducted at ambient temperature and atmospheric pressure.
5. The process of any one of the preceding claims wherein 0.5 to 5% of filter aid optionally present.
6. The process of any one of the preceding claims wherein agitation is employed to maximize the contacting of said strong acid and said amide impurity.

7. The process of any one of the preceding claims wherein said strong acid comprises sulfuric acid.

8. The process of claim 7 wherein 50 to 70% sulfuric acid is employed.

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9. The process of claim 8 wherein up to 5 wt% of 50 to 70% sulfuric acid solution is employed.

10. The process of any one of the preceding claims which further comprises a decolorization step.

11. The process of claim 10 wherein said decolorization step comprises contacting said acid-treated nitrile with a color-removing adsorbent.

15 12. The process of claim 11 wherein said adsorbent is selected from the group consisting of clays, activated carbons, alumina, silica gel, zeolites and mixtures thereof.

20 13. The process of claims 11 or 12 wherein 0.1 to about 5% of said adsorbent is employed.

14. The process of any one of claims 11-13 wherein said adsorbent comprises a bentonite clay, and said reaction mixture is in the form of a slurry of finely divided particles of said clay with said solution.

15. A process for the purification and decolorization of fatty acid-derived nitriles containing long-chain aliphatic amide impurities which comprises washing a solution of said amides and fatty acid-derived nitriles with an amount of a strong acid effective to remove the amide as a salt in the acid layer, separating said acid
5 layer from said solution leaving an acid-treated fatty acid-derived nitrile substantially free from said amide impurities, and thereafter contacting said acid-treated nitrile with an adsorbent in an amount effective for color reduction.

16. The process of claim 15 wherein said strong acid is selected from the group
10 consisting of sulfuric acid, hydrochloric acid, hydrobromic acid, perchloric acid, nitric acid, fluorosulfonic acid, methanesulfonic acid, trifluoromethanesulfonic acid, toluenesulfonic acid, phosphoric acid and mixtures thereof in combination with an amount of water that allows an amide salt to remain substantially insoluble in excess aqueous acid and mixtures thereof.

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17. The process of claim 15 or 16 wherein said adsorbent is selected from the group consisting of clays, activated carbons, alumina, silica gel, zeolites and mixtures thereof.

20 18. The process of any one of claims 15-17 wherein 0.1 to 15 wt% of said strong acid is employed and wherein 0.1 to about 1% of said adsorbent is employed.

25 19. The process of any one of claims 15-18 wherein said acid is sulfuric acid and said adsorbent comprises a bentonite clay, and said reaction mixture is in the form of a slurry of finely divided particles of said clay with said solution.

20. The process of any one of claims 15-19 wherein said process is conducted at ambient temperature and atmospheric pressure.